

### **Orbit Replacement Fleet: Public Input Summary, November 2019**

#### I. Background

Many of the existing Orbit vehicles are approaching the end of their useful life, and are due for replacement. Since these vehicles entered service in 2013, the City has encountered several operational challenges – including inadequate operating range necessitating mid-day refueling, poor mechanical reliability during the summer heat, and inadequate passenger capacity on certain routes. As a result, the City of Tempe and Valley Metro are soliciting responses from bus manufacturers for replacement of the older Orbit buses.

#### II. Outreach

Postcards inviting the public to attend the open houses or to comment online were mailed to 23,781 households. The mailing was targeted to households within ¼ mile of all the Orbit routes. Public meetings were held on Saturday Nov. 2 (10 attendees) and Wednesday, Nov. 13, (17 attendees) 2019 and the topic was posted online from October 29 – November 14, 2019 through Tempe Forum. A total of 295 unduplicated survey responses were received. Below is a summary of the additional outreach that was conducted.

## **FACEBOOK**

#### 10/23 – public meetings

Reach/Impressions: 6330 Engagement: 459

## 10/29 – public meeting reminder

Reach/Impressions: 2696 Engagement: 294

# 11/12 – online input reminder

Reach/Impressions: 1964 Engagement: 161

## **NEXTDOOR**

#### 10/23 – public meetings

Reach/Impressions: 4541 Engagement: 11

# 11/12 – online input reminder

Reach/impressions: 3302 Engagement: 10

## **TWITTER**

# 10/22 – public meetings

Reach/Impressions: 4141 Engagement: 44

# 10/29 – public meeting reminder

Reach/Impressions: 4263 Engagement: 54

# 11/12 – online input reminder

Reach/Impressions: 3822 Engagement: 27

## **MEDIA**

#### Press release: 10/22 & 10/23 – public meetings:

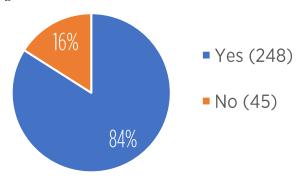
emails sent: 1484 open rate: 37.48%

# 10/31 – Tempe this Week:

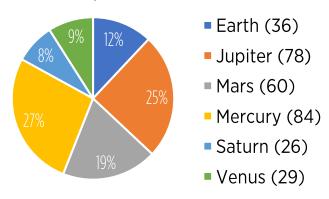
emails sent: 3770 open rate: 35.2%

### II. Survey Results

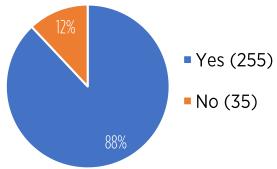
Question 1: Do you live on or near the Orbit route? (294 responses)



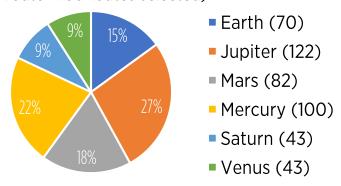
Question 1 A: If you do, which one(s) (294 responses- 309 routes cited- some riders chose multiple routes)



Question 2: Do you ride the Orbit? (290 responses)



Question 2A: If yes, which route(s) (295 respondents; some chose more than one route- 460 routes selected)

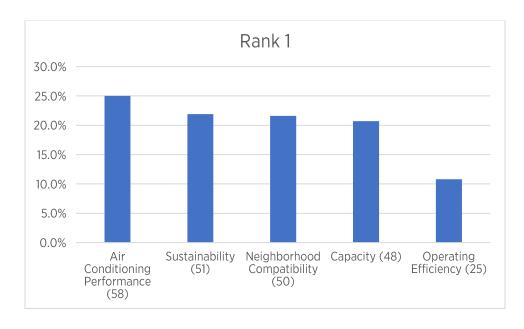


<u>Question 3</u>: Respondents were asked to rank five priorities for the new buses with 1 being the most important and 5 being the least important. 232 respondents ranked the priorities and 69 either did not rank them or chose a rank number more than once, rendering the ranking invalid.

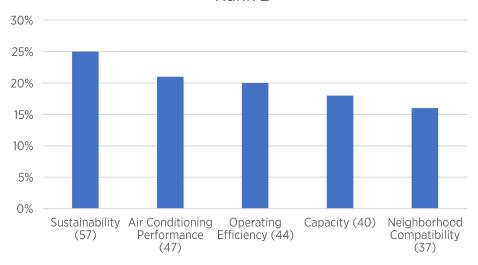
Using statistical software, a logarithm\*\* is applied to the data to determine the overall ranking. The results are as follows:

- 1. Sustainability
- 2. Air Conditioning Performance / Suitability for the Desert Environment
- 3. Neighborhood Compatibility
- 4. Passenger Capacity
- 5. Operating Efficiency / Cost Savings

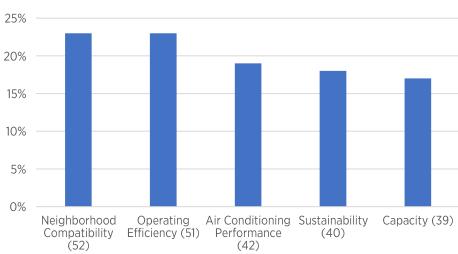
Below are the responses broken out by rank.



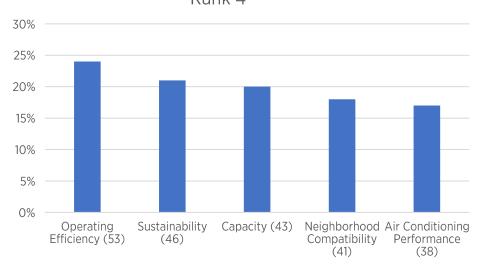


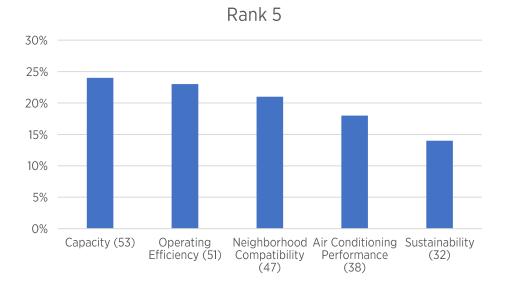


### Rank 3



#### Rank 4





<u>Question 4</u>: Please share any additional thoughts you have related to the new Orbit vehicles. (162 responses)

- 1. Will they be quieter? Some of the current buses are so noisy we can hear them go clanking and rattling by our house throughout the day even with the windows closed. They are also almost always empty. Complete waste of fuel and only adds to the air pollution and heat trap that is the valley.
- 2. 2 boarding doors is a major benefit in standing passengers being able to squeeze onto a full bus. It allows new passengers to squeeze rearward from rear door, squeeze forward from rear door, and squeeze rearward from front door.
- 3. My house is directly on a Orbit route. The shuttles pass by in both directions. They hit the speed hump in front of my house. It is very loud--too loud to keep windows/doors open. The shuttles tear the street up--we now have horrible potholes that have to be reported regularly. I would say 95% of the shuttles are completely empty. I have never seen more than one person on a shuttle passing by. I appreciate these shuttles are meant to help people get around and would probably being willing to be inconvenienced if it looked like anyone used them. I really hope the city will release data on the number of riders. We are going to sell our house in the next year and take our tax money to another city. Being put on an Orbit route is not a small factor in this decision. I hope Tempe will be able to come up with better alternatives for whoever lives here next.
- 4. The drivers are very friendly and helpful with my walker. I use Orbit to go to the grocery store.
- 5. Frequency of pick ups is important to me too, especially on the weekends.
- 6. It would be nice if there was an Orbit that traveled north of Guadalupe and Hardy.
- 7. Very thankful for the neighborhood bus service. No costs helps me tremendously with my budget as a low-income customer.
- 8. There seems to be little consideration for residents along the Orbit routes from my contacts with the elected officials on this matter. When initiated, the City promised only small, quiet buses. This was the case until about two years ago when the new large buses were introduced without warning. These buses are extremely noisy and when you live on a corner where they are constantly starting and stopping, the noise is a nuisance. The roaring engine when starting up vibrates the homes, the brakes squeal and belch, the air conditioning has a screeching, whining sound and belches out copious amounts of hot air, and last but not least, every time the doors

open, there is a loud announcement. We have made suggestions for noise mitigation to the council members and the vice mayor which they haven't even acknowledged, much less considered. I think the residents deserve more consideration than this, especially since they're paying taxes so everyone can ride "free." It would be nice if the City would keep their promise to the residents.

- 9. Very nice, thanks for the bus system.
- 10. Heavy duty busses will tear up our neighborhood streets. Need to prioritize reduction in wear, noise and pollution!
- 11. Now is the time to go EV and reduce carbon emissions. Tempe should be the leader that it is.
- 12. the newer buses are a great improvement over the original buses.
- 13. Please consider making them electric.
- 14. I just don't understand why Tempe decided to pull a "bait and switch" with these things. We were promised small, unobtrusive vehicles and indeed, they were scarcely larger than passenger vans. Suddenly, there are full-size buses tearing down the street. And they're still mostly empty! These larger buses are unsafe and ill-suited to our smaller neighborhood streets, like College.
- 15. Use "bus-style" seating where passengers are facing the same direction as the driver versus seats that span the side walls.
- 16. KEEP THEM SMALL!! The new orbit buses are way too big for the neighborhoods in which they travel. I am a cyclist, and I have seen numerous near-collisions with children on bicycles. Please understand that I will personally view the individuals who decide on the big buses to be at fault for having killed children.
- 17. Please make every effort to purchase battery-electric Orbits to improve our air quality and take advantage of our Arizona solar power. This will serve as a pilot of electric buses for Valley Metro as well.
- 18. The buses should be smaller, but there should be more of them so that they arrive in shorter intervals. I am both an orbit user, and a driver that shares the road with them. At their current size, they are unable to safely navigate the current layout of their route. I was almost hit by an orbit that was turning right from the north-facing drive which exits from the library and Pyle center onto southern. I was in the left lane going straight on southern, and the bus came into my lane and nearly hit me when it was turning out. I have also seen several near misses involving orbits at this particular drive. The buses need to be able to safely turn into the first lane without taking up both lanes to turn out. As a rider on the orbit, I have waited as long as an hour for an orbit to arrive. If they had more busses in circulation, I would be a lot more likely to ride them more often instead of driving. But I can't afford to waste up to an hour of my time waiting for a bus to come that supposedly should be around every 15 minutes.
- 19. I am glad to hear that newer buses are under consideration. I plan to use the Orbit buses more in the near future. I have a 21 year old vehicle that I do not want to drive every day. The Orbit buses are so convenient and go almost everywhere that I need to go. This is a very valuable service to the citizens of Tempe and one of many reasons why I chose to move here several months ago.
- 20. Love the new ones. They're in such better shape and don't fill up during rush hour. What a convenience! (That somehow others find a reason to complain about.)
- 21. Would like to see them in more neighborhoods.
- 22. Smaller size vehicles are most important to me. If more, more frequently running at times is needed to accommodate demand- fine. The larger vehicles are not better!!
- 23. All priorities ranked as low priority
- 24. Great service!
- 25. Love the bigger buses!

- 26. Sometimes the bus drivers are very careless and drive wrecklessly.
- 27. The newer vehicles are far too large to be operating in neighborhood communities. They are similar in size to city busses and should be rerouted to major thoroughfares with 4+lanes NOT streets like McAllister Ave where I live. I believe all the Orbit busses to be a safety hazard when routed on neighborhood streets and see no reason why they cannot serve the community on major streets similar to Metro busses. If riders cannot walk to the major streets, then they can use Uber, Lyft or a cab.
- 28. Would love to see a north/south route on Kyrene from Southern North to Rio Salado and South to Warner.
- 29. Stop announcement system should be part of the system.
- 30. little Orbit buses are just too old. AC sucks. I am a bus driver.
- 31. Existing Orbit buses are uncomfortable. I'm thin, they hurt my back/rough ride. I have to bring a cushion. They lurch forward. I live on Mercury line, on narrow roads we have to wait. Do your buses have to be so big and so wide?
- 32. I worry about the longer Orbit operating on College (and other non-arterial roads), though I understand the need for greater capacity on those routes. A delicate balance.
- 33. I appreciate everybody to infinity. Blessings and miracles.
- 34. I much prefer the larger capacity vehicles that were rolled out fairly recently. In addition to being able to accommodate more passengers, their lower center of gravity make them a more comfortable ride than the smaller, older blue Orbit vehicles. One of the drivers also remarked that the older blue Orbits were designed poorly in terms of visibility.
- 35. 1: The "new" busses have dangerously dazzling headlights. I have found them to be dangerous as an oncoming vehicle from as far as 3000'. I have made a complaint to this effect to the Council, but nothing has been done. It is my opinion that the LED clusters used are unfocused floodlights, rather than DOT approved low-beams which must be dipped below parallel to the ground. 2: The use of "hazards" whilst parked does not provide other road users with any signal that is of any use. This is explained in this 1993 episode of Top Gear https://youtu.be/uws9ezxdfME?t=874
- 36. I have avoided cycling past the Tempe Transport Center because the row of Orbit busses that line the cycle lane are all sitting there with their hazards on, which means that I am unable to tell if any are about to start manoeuvring into my path (and yes, they do without looking). This practice may be part of some "code", but it is dangerous to motorists and downright terrifying to cyclists and motorcyclists. 3: In Europe it is illegal for commercial vehicles and public transport to keep their engines running when stationary. To this end, many busses have moved to a hybrid propulsion to keep A/C or heating running, etc. I pass Mercury parked outside Escalante CC every day: it is often there for enough time that the driver is not on board, and the engine remains running. In fact, every time I pass a stationary bus, its engine is running. Since the A/C is tied to the engine in most vehicles, turning off the engine will NOT reduce the efficiency of the cooling.
- 37. The new buses are much too loud for neighborhood streets. It feels like a full size city bus is driving in front of your house every 15 minutes. I enjoy the Orbit but would like to see neighborhood-sized vans that don't wake up sleeping babies.
- 38. Orbit is great! Only concern is noise and vibrations on minor neighborhoods streets. Passing buses double issues or move to feeder streets/ move to major streets. Love it!
- 39. Schedule frequency and service hours and the ability to know where the next bus is. These are more important than the choices that were provided

- 40. Drivers need longer breaks and more time to do the route. Take Earth and Mars off same paddler. Get rid of the 1600s. They are uncomfortable, unsafe and make drivers feel unsafe. I am a driver.
- 41. Smells- clean buses up more often
- 42. Neighborhood compatibility and safety are big concerns. Driver training and reliability are a must. No permanent stop/shelters in residential neighborhoods. Lower profile vehicles are preferred, along with reduced noise output. Adopt a maximum size limit to avoid having the bus size grow over time. Explore the possibility of deploying different sized vehicles to service a route based on ridership in a given area.
- 43. I prefer the current larger buses
- 44. Drivers need further training in ADA concerns, especially service dogs
- 45. Treatment to homeless and poorer people by drivers is disgusting. I've witnessed drivers kick people off due to poverty. Unless they are harming someone, no one should be treated this way.
- 46. They are very clean!
- 47. I am very grateful for the Orbit bus system. New buses with air conditioning and increased passenger capacity would be a welcome addition to the Orbit system. A covered bus shelter on the South-West corner of Gammage Parkway and Forest Ave would also be nice. Thank you very much for providing the Orbit buses, and for all you do for the community.
- 48. I love the Orbit and how it's cost friendly. It also helps me to get to work in Tempe where you have to pay for parking everywhere.
- 49. They are a lot better with space and air conditioning
- 50. wish it were closer to College and Ellis
- 51. I wish I lived in Tempe
- 52. If Tempe is serious about shifting the focus of streets/traffic from personal single rider cars to public transit, bicycling, and walking, investing in rider friendly bus vehicles is a huge first step. One feature I personally would love to see that I haven't heard mentioned yet is GPS capability! It would be so extremely helpful to have an app or some other tool where I can look and see where my bus is, how far away is it, how long until it gets to my stop, etc. As a rider, waiting for the bus in the desert heat can be brutal, and can and does scare people away, sometimes even me, from using the bus, even if it's free. If I know where the next bus is and how long it should be until arrival, it can help riders make better decisions about their transportation options.
- 53. Can you make them run on time? And not leave early or leave late?
- 54. They are very nice, although my route can be a bit packed.
- 55. The new buses are great, although the legroom in back can be an issue. Best of all, they don't rattle like the old (but faithful) fleet!
- 56. I think they are great. I have ridden one, and we used 3 bike racks on the Jupiter to get home from the Lake Birthday party on Saturday.
- 57. Tempe should invest in electric buses!
- 58. As someone whose home is along the route, we are dismayed to see that the RFP includes size limitations that are just larger than the newer buses now being used. Those buses are already too high (privacy issues with homes along the route), too wide (frequently go into the bike lanes), and too loud. We have consistently raised this issue with City staff. Very disappointed that they have not taken it into consideration in this RFP. The City should seek lower profile, quieter, and narrower buses that fit on neighborhood streets.
- 59. The new Orbit vehicles are better in the most important ways: comfort and durability.

- 60. The buses are too big to be neighborhood friendly. The drivers of the buses seem untrained or uncaring. This is a serious concern for safety.
- 61. My son's who go to ASU have tried to ride this service only to find Homeless being transported to and from between the train and the jaycee park. Many are insane, they urinate on the seats or have soiled themselves and then take a seat. We wish you to stop providing this service as we are finding needles and other junk at the park and in our front yards thanks to your free service. At the very least if you insist on having it you should charge!
- 62. additional bike rack located at the rear of the vehicle
- 63. rebuild/refurbish as needed 2. ridership 3. routes and best time use
- 64. Embassy Suites is a bus stop on two Saturns east and west. I can use Saturn west to stop at Carter Dr. (where I live) or Saturn east (Embassy Suites can be a stop for meso I can walk directly to my home and not cross Rural. Some drivers will not stop at Embassy Suites. More important to get over to Lakeshore Dr. I take whichever Orbit east or west comes first. I prefer west.
- 65. Because of our "treelined" streets your man may need to give more importance to bus height
- 66. It should remain free- as we voted for that. I think the newer longer buses are much better- the older ones are like a school bus painted blue. My son and his friend are disabled and ride it every week.
- 67. Orbits are often empty. I seem to spend a lot of time waiting.
- 68. Don't like the homeless on the bus with fleas.
- 69. Very nice and equipped- A/C needs to work properly in the summer
- 70. I'm blessed with the Orbit every time I ride it. I would like to see the passengers respect the driver and more room.
- 71. We do not need bigger buses on our residential street passing hundreds of times a week, the buses now drop 5 or 6 kids off at Laird elementary school in the morning and pickup the same number of kids after school, all other times they are mostly empty. The Orbit drivers come off of streets like Scottsdale rd., Miller rd. and Mckellips rd. which have higher speed limits and do not slow down to our neighborhoods much lower speed limit, not to mention the fact that they drive in the middle of our residential streets and expect everyone else to pull over to the side and stop for them, the fact that they are driving much bigger vehicles doesn't give them the right of way all the time. They have also brought more crime into our neighborhood, my security cameras have recorded 3 instances in the last year alone where people riding the buses get of, grab packages and other items from mine and my neighbors front or side yards and immediately jump on the next bus that passes, I'm sure the buses are the perfect means for thieves casing neighborhoods cause the time the times that our neighbors and us have had thing stolen, the thieves seemed to know what they were going after.
- 72. I have recently been wheelchair-dependent (this can happen at any time to anyone), and recognize the gift of the neighborhood circulators in Tempe. Because our block has a route, I understand that on any street there are differences of opinion about the needed size of the bus (larger if you use it and see that at different points along the route there is a need for more space, smaller if you only look out your window and have to pull your car to one side to allow the bus to pass). For me, sustainability is the top focus because just as we all need the effective transportation to be provided by the Orbit, those along the route are most impacted by the fuel choice. By choosing electric buses (as the technology allows us to do so), we can continue to improve the air quality along routes and as a whole community. For future RFPs we need to see whole-life costs including estimates for changing energy costs, and we should be comparing with an assumption that the social costs of carbon will begin to be added to the system

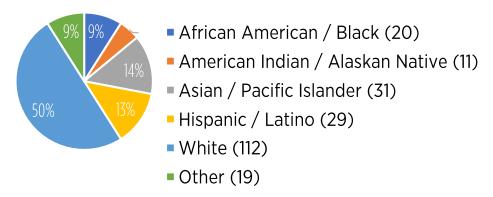
- (through an increasing price on pollution/carbon). This highlights the value of the City of Tempe advocating at the national level for legislation that will assist us to meet our long-term clean-energy goals. I would highlight HR 763 as one such bill which puts a predictably increasing price on CO2 equivalents, and then sends the proceeds back to households to address the potential equity concerns as part of the market dynamics.
- 73. Please keep the buses small, like the original busses, so they are a fit for the neighborhoods they dissect. Along the Jupiter route, people drive Into the neighborhood, park their cars either on residential streets or at an Air Garage, and board Jupiter along College Ave. Has any consideration been made with regards to ASU's high dormitory rentals rates and parking fees that drive students to live off campus, and in turn seemingly burdens the Orbit capacities? It seems the Tempe Campus is a major destination and pickup point for a number of Orbit routes. How can ASU help resolve this for the surrounding communities, including funding, without placing larger busses on neighborhood streets?
- 74. More routes would be cool! I really like the bigger buses and higher capacity.
- 75. Increase in frequency is required. More details about the exact bus timings needs to be available online. Would be extremely useful to have details about any real time delays/detours online and at stops. Real-time details about the time for arrival of next bus.
- 76. I'm extremely grateful that the new Orbit vehicles have much better air conditioning. The old ones can be quite miserable sometimes, temperature-wise.
- 77. The Orbit is very convenient for me.
- 78. frequency of buses can be improved. Mars buses can be more punctual and follow timings strictly.
- 79. the new buses are so much more comfortable in terms of space and a/c. the upgrade significantly improved my experience.
- 80. I have been extremely impressed with how efficient this free bus system is. I have only taken it twice personally but I live off a route so I see everyday how on time and easy this is. Keep it up!
- 81. sometimes it is too cold in the orbit
- 82. They are big and nice to be in
- 83. Love the bigger buses! Because of the availability of Orbit we have not had to buy a car. We moved to Tempe 1.5 years ago. Thanks for the great rides!
- 84. Many times I am unable to ride Orbit because it was crowded with too many ASU students on board.
- 85. We have used the Orbit service to attend the New Years Eve Block Party many years ago.
- 86. Not enough info provided to the residents to make it effective.
- 87. some of the orbit drivers drive too fast and then the break hard. other than that they're fine.
- 88. more comfortable, smoother ride
- 89. they are pretty nice
- 90. Orbit is wonderful. We finally got the newer buses on the Earth route. I hear a lot of complaints about the smaller buses and bad A/C. I don't care what size the bus is so long as it is clean, working and on time.
- 91. Too many Orbits. Passengers disrespectful. Leave trash all over. Orbits go too fast on street. They are destroying roads.
- 92. Yo estoy de acuerdo con los cambios de autobuses que esta aciendo la ciudad de tempe es muy necessario el servicio para mucha persona esperamos soluciones buenas okay. I am in agreement with changes the city of tempe is making to buses the service is very important to many people and we expect good solutions okay.

- 93. The Orbit should not go through planned communities like the Lakes. I live on Lakeshore Drive. Start charging bus fare if you want to use the Orbit.
- 94. I prefer the smaller sized ones the larger ones seem too big for our smaller neighborhoods. The school buses are huge and go on our street.
- 95. the new buses have great air conditioning
- 96. use more high capacity metro buses during the peak hours 10-11am 6pm-8pm
- 97. Love it. Wish the air conditioning is lower.
- 98. I like them! They are a huge improvement from the last model. So many more of my classmates use them. great job!
- 99. No more than small bags/no extra luggage allowed on Orbits, carts are ok. Dangerous otherwise.
- 100. Good service, convenient
- 101. passenger capacity important to routes serving congested areas such as asu tempe campus
- 102. Larger shuttles will definitely help. It would also be great to have an app, or some way to check to see if the shuttles are on time or running late.
- 103. I find more comfortable to have the exit door at the back of the bus.
- 104. Drivers should undergo implicit bias training. Buses should never run if the air conditioning isn't running properly. Valley Metro should hire "secret passengers" to provide feedback that the drivers are driving safely.
- 105. At terminal on 5th St., bus pulled in with passengers but sigh said "not in service" but it clearly was full of passengers and the driver said "it is in service" but he left the "not in service" on. He also parked about 16" from the curb (both doors). And he was a bit gruff (grumpy) #1635. Some other drivers are grumpy, too. Most are nice.
- 106. Great service. I teach at ASU and take the Orbit rather than driving and parking.
- 107. How can the driver know if the front mounted bike rack is down and secure?
- 108. Reliability is important too.
- 109. Great Service
- 110. OTP most important aspect
- 111. I like the heating, air conditioning. The brakes are a little too touchy
- 112. The higher capacity is extremely nice and the air conditioning in the new vehicles makes them much nicer to ride in the summer.
- 113. I love the increased capacity and new A/C on the new vehicles
- 114. Every driver has its own set of rules and regulation sometimes they stop in one place, sometimes they don't. It is difficult to understand the exact stops.
- 115. I prefer the new buses they have more space and better climate control.
- 116. The signs will change during the drive and display different routes or read out wrong street names.
- 117. Love the new vehicles
- 118. I found it interesting that service is for free
- 119. medium-sized heavy-duty
- 120. I like that it has more seats and 2 doors/exits
- 121. Earth going around ASU campus
- 122. I love the speed and able to follow the lane (sic)
- 123. The Orbit is a good way to travel to work when in my routes. Also great for when no money to get to the grocery store or get some fresh air instead of being cooped up at home.
- 124. I like how the speed is getting to your destination & don't have to wait too long
- 125. need to clean the bus and change old bus for best?
- 126. low profile no steps
- 127. more frequent on route would be better

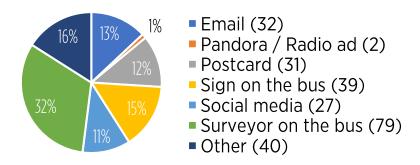
- 128. Just once the Orbit (Saturn going east) didn't stop for me and my elderly client, he just past us even though I waved at him to stop!
- 129. Do not like the new buses. They are too big and noisy for neighborhood use plus the recordings on bus are too loud. Riders do not need to be notified of where we are.
- 130. I love the Orbit. I drive partway to campus and the the Orbit to avoid buying a parking pass.
- 131. Really nice and efficient. I like how it is free and drivers are friendly.
- 132. I like that it has more seats and 2 doors/exits
- 133. Earth going around ASU campus
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- 142. I love the Orbit. I drive partway to campus and the the Orbit to avoid buying a parking pass.
- 143. Really nice and efficient. I like how it is free and drivers are friendly.
- 144. It's good. Improve frequency at Mercury (Dorsey Lane)
- 145. Yes, AC is much better than the older one
- 146. Small ones are packed as hell in the mornings sometimes you get passed up on
- 147. none
- 148. Space is a big thing. No one should have to miss a ride because the bus is full.
- 149. I don't think intoxicated people should be allowed to ride; threaten other passengers
- 150. The design on engine \_\_\_ systems added fans to much noise pollution and failing to use ran air controlled force air cooler affect use a thicker grade oil for different experiment and adjustments to main computer meet altitude specs and \_\_\_ Tempe and current temps and operating volts. More courteous drivers and respect other drivers. And drivers need to get class 1 fingerprint access like bus drivers
- 151. Drivers sometimes don't stop. Sometimes they are one after the other. It's great to have Saturn.
- 152. I appreciate the services you all provide, you don't know how much we are grateful. Thanks very much Orbit of Tempe!
- 153. Orbit is awesome! Thank you for the great service. Keep it up!!
- 154. The air is too cold in winter. No air in summer and drivers and passengers are too hot. 2. doesn't run often enough 3. no one calls you back with problems
- 155. Route is also very important generally
- 156. Please accommodate more passengers as there is often not enough room
- 157. I love how spacious and clean it is. I would advise for the bus to mn more often (Earth / Mars) and to train drivers on customer service
- 158. Thanks for everything.
- 159. I really like Orbit buses. It makes the City of Tempe unique and student friendly.
- 160. Bus frequency could be increased in the morning and on Sundays

- 161. I like the fact that the new buses broadcast the upcoming stops and are more equipped to handle the expanding capacity of Tempe neighborhoods.
- 162. They are very great, but capacity because in the morning a lot of people ride.

Question 5: Race / ethnicity (222 responses)

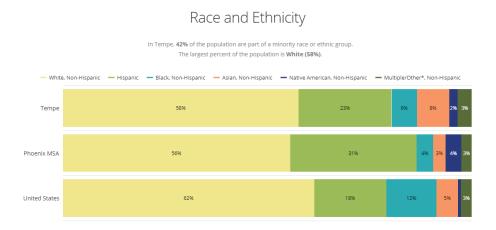


<u>Question 6</u>: How did you find out about the Orbit Replacement Project? (223 responded; 250 answers – some individuals selected more than one option)



### III. Demographic Information

Since Tempe has bus routes throughout the entire city, the project area is the city limits.

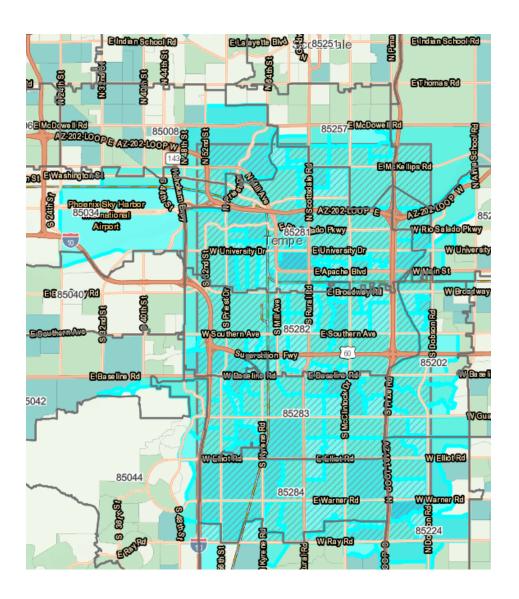


## Transportation in Tempe



Source: U.S. Census Bureau, 2017 American Community Survey (ACS) 5-Year Estimates

The data that follows is based on census tract data that includes the area in turquoise below.



| Selected Block Groups ACS 2012-2016 ACS 5-Year Estimates |            |        |
|--|------------|--------|
| Topic  | Estimate F | ercen  |
| Total Population   | ,          | 45,19. |
| ace and Ethnicity  |            |        |
| Hispanic   | 9,169      | 20.39  |
| Non-Hispanic Non-Hispanic                                |            |        |
| White, Non-Hispanic                                      | 27,256     |        |
| Black, Non-Hispanic                                      | 3,189      | 7.1    |
| Native American, Non-Hispanic                            | 1,127      | 2.5    |
| Asian, Non-Hispanic                                      | 2,602      | 5.8    |
| Pacific Islander, Non-Hispanic                           | 451        | 1.0    |
| Other, Non-Hispanic                                      | 22         | 0.0    |
| Two or More, Non-Hispanic                                | 1,375      | 3.0    |
| Minority (1)   | 17,935     | 39.7   |
| bility to Speak English                                  |            |        |
| opulation 5 years and over                               | 42,869     |        |
| Speak Only English                                       | 33,072     | 77.1   |
| Speak Other Languages                                    | 9,797      | 22.9   |
| Speak English "very well"                                | 7,198      |        |
| Persons with Limited English Proficiency (LEP)           | 2,599      |        |
| Speak English "well"                                     | 1,716      |        |
| Speak English "not well"                                 | 725        |        |
| Speak English "not at all"                               | 158        |        |
| louseholds   |            |        |
| otal Households  | 18,021     |        |
| Family Households (Families)                             | 8,430      | 46.8   |
| Married-couple family                                    | 4,997      |        |
| Female Householder, no husband present                   | 2,138      |        |
| with own children under 18 years                         | 906        |        |
| Nonfamily Households                                     | 9,591      | 53.2   |
| Householder living alone                                 | 5,919      |        |
| lousehold Income (in 2016 inflation-adjusted dollars)    |            |        |
| otal Households  | 18,021     |        |
| Less than \$10,000                                       | 2,041      | 11.39  |
| \$10,000 to \$14,999                                     | 1,104      | 6.1    |
| \$15,000 to \$24,999                                     | 1,990      | 11.0   |
| \$25,000 to \$34,999                                     | 1,811      | 10.0   |
| \$35,000 to 49,999                                       | 2,701      | 15.0   |
| \$50,000 to \$74,999                                     | 2,851      | 15.8   |
| \$75,000 to \$99,999                                     | 2,652      | 14.7   |
| \$100,000 to \$149,999                                   | 1,800      | 10.0   |
| \$150,000 to \$199,999                                   | 638        | 3.5    |
| \$200,000 or more  | 433        | 2.4    |
| with related children under 18 years                     | 101        |        |
| Female householder, no husband present                   | 671        |        |
| with related children under 18 years                     | 612        |        |
| Male householder, no wife present                        | 206        |        |
| with related children under 18 years                     | 145        |        |
| Commuting to Work  |            |        |
| Vorkers 16 years and over                                | 25,946     |        |
| Car or Truck - drive alone                               | 18,570     | 71.6   |
| Car or Truck - carpool                                   | 2,381      | 9.2    |
| Public Transportation                                    | 1,227      | 4.7    |
| Bicycle  | 1,543      | 5.9    |
| Walked   | 545        | 2.1    |
| Other means (taxicab, motorcycle, etc.)                  | 619        | 2.4    |
| Work at home   | 1,061      | 4.1    |
| ehicles Available  |            |        |
| Occupied Housing Units                                   | 18,021     |        |
| No vehicle available                                     | 1,946      | 10.8   |
| 1 vehicle available                                      | 7,362      | 40.9   |
| 2 vehicles available                                     | 6,100      | 33.8   |
| 3 or more vehicles available                             | 2,613      | 14.5   |
|  |            |        |
| rea  |            |        |
| rea Total Area in Acres                                  | 6,816.2    |        |

Source: United States Census Bureau, American Community Survey 2012-2016 5yr Estimates

Source: U.S. Census Bureau, 2012-2016 American Community Survey (ACS) 5-Year Estimates. ACS data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate is represented through the use of a margin of error (MOE). In addition to sampling variability, the ACS estimates are subject to nonsampling error. The MOE and effect of nonsampling error is not represented in these tables. Supporting documentation on subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website (www.census, goy/acs) in the Data and Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website (www.census, goy/acs) in the Methodology section. The MOE for individual data elements can be found on the American FactFinder website (factfinder2.census, goy). Note: Although the ACS produces population, demographic and housing unit estimates, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. Prepared by: Maricopa Association of Governments, www.azmag.goy, (602) 254-6300

\*\* In the data, each respondent's top priority item will appear with a 1, their next with a 2, etc. For calculating the aggregate order for the summary, each item is given a weight that is the inverse of its position in the list. So in a five item list, the user's top priority item will be given a weight of 5, their next priority a weight of 4, etc. The aggregate ordering then uses the average the weights for items across all of the user lists.

Items that are <u>not</u> prioritized by a user will be given a weight of 0. In effect, any items the user does not prioritize are considered to be equally of no priority at all. This is to prevent skewing the results when, for example, there is an item that most users skip and don't bother including in their lists, but the few users who do include it weight it at the top of their lists. Without the zero weighting, the items most users don't care about could appear as the highest priority.